



## Effect of the root crude extract of *Brassica Napus* var. *rapifera* (peroxidadasa) in concentration phenol of water samples of Lake Chapala, Jalisco Mexico

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### General Note

 Article is recommended to print as color digital version in recycled paper.

### ABSTRACT

Self-consolidated concrete is a special type of concrete which requires less workability and is easy to stabilize. Self-consolidated concrete using rubber is set up to consume the waste tyre rubber containing different types of untreated tyre rubber. Fine aggregates are replaced by weight with tyre rubber. The mechanical and micro structural behavior are investigated and discussed in this paper. The fresh and hardened properties of such materials are compared with those of a typical reference formulation of self-compacting concrete. A comparison of the obtained compressive strengths with literature data confirms that self-compacting technology helps binding rubber phases.

**Keywords:** Concretes; self-compacting; compressive strength

## 1. INTRODUCTION

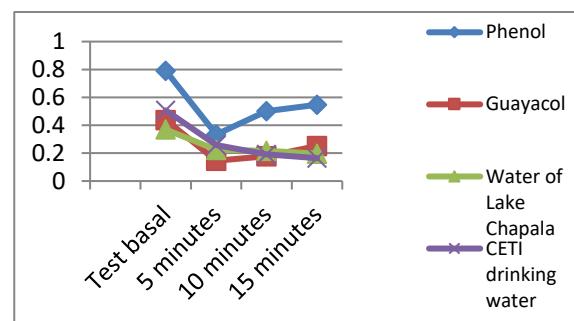
An observational study was carried out, such study consisted on collecting ecological water samples from Lake Chapala Jalisco, Mexico and comparing those to the Industrial and Technical Education Center's (CETI) drinking water by using a phenol solution at 2% and root extract of *Brassica Napus var. rapifera* (turnip) which contains a high percentage of peroxidase enzyme, with the.

## 2. OBJECTIVE

To determine the effect of peroxidase enzyme root *Brassica Napus var. rapifera* (turnip) in the concentration of chlorophenol in water samples from Lake Chapala.

## 3. RESULTS

Water samples collected from Lake Chapala Jalisco reacted to peroxidase in a period of 5-10 minutes, which denoted that the enzyme is able to act on this substrate. Finally results (Figure 1) obtained indicate that the presence of peroxidase enzymes exists in the root extracts of *B. Napusvar* "turnip", which is involved in the degradation of phenol and that the effect on the degradation of phenol group is effected with high enzymatic activity of approximately 98%.



Lake Chapala Jalisco is one of the largest natural lakes in Mexico. It is the main source of water to supply the same to the Guadalajara metropolitan area, unfortunately receives contaminated water such as laden stools pig and anthropogenic materials that threaten endemic species of fauna and promote an increase in pest lily, and among other important works on issues related to human health risks.

**Figure 1**

Comparative analysis on the effect of peroxidase from the baseline measurement with respect to time and enzyme activity. It represents a major touristic attraction and constitutes one of the sources who collaborate in the ecological balance and is involved in maintaining climate stability of the environment.

## 4. CONCLUSION

The oxidizing action of the chlorophenol in wastewater treatment removes carcinogenic and mutagenic actions and therefore reduces public health risks to human population. - Using the methodology was possible to demonstrate the presence of peroxidase enzyme activity derived from the plant known in Mexico as turnip (*Brassica Napus var. Rapifera*) in inhibiting and disabling chemicals such as phenol and chlorophenol group - The enzymatic activity of peroxidase was demonstrated, as well as its capacity of or time which ranged from 5 to 10 minutes, time in which its function to inhibit and off phenol and chlorophenol group was observed.- It is interesting to consider the proposal that the enzyme activity of *Brassica napusvar* could form part of the strategies of Phyto-remediation of sewage and even those containing in its composition ancillary industrial waste. And even dabble in search of aquatic plants could be bio - remediating the aquatic ecosystem by decreasing concentrations of phenol - The results allow predicting the presence of the enzyme obtained using the root ( *Brassica Napus var. Rapifera* ) in wastewater treatment and even as a food product added to help reduce the impact of exposure to phenol - chlorophenol from drinking water intake or farm products where pesticides have been used and also have been used in sewage to irrigate these crops , which has demonstrated the presence of these chemicals and it is unknown if after washing vegetables grown under the conditions described above, any residues or low concentrations remain, as the EPA noted that a substance that produces an effect at high concentrations also occur at low concentrations.

## REFERENCE

1. Ruvalcaba Cobián Jesús Carlos, Martínez Palomar José Rafael, Ruvalcaba Ledezma Jesús Carlos. Peroxidase Effect of the Root of *Brassica Napus var. rapifera* (turnip) Phenol Concentration in Water Samples of Lake Chapala, Jalisco Mexico. *Int. j. Pure & App. Biosci.*, 2013, 1(6), 14-23